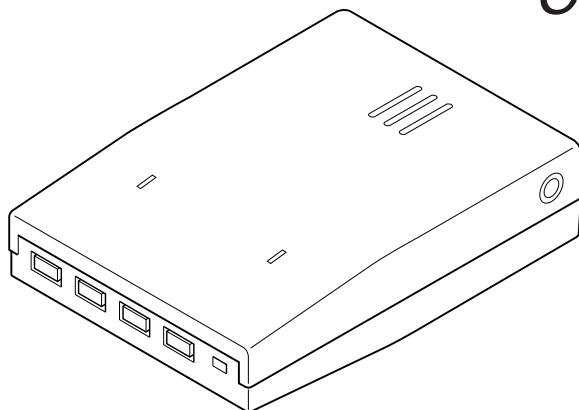


UH-1000

SERVICE MANUAL

*US Model
Canadian Model
AEP Model*



SPECIFICATIONS

Mass	500 g (1 lb 1.6 oz)
Dimensions	185 × 134 × 51 mm (l/w/h) (7 3/8 × 5 3/8 × 2 1/8 in.)
USB terminals	Upstream : 1, Downstream : 4
Voltage per port	DC + 5V
Current per port	500 mA (max.)
Operating temperature	0 – 40 °C (32 – 104 °F)
Supplied accessories	AC power cord (1), USB cable (1), Rubber feet (4), Stand (1), Instruction manual (1)

NOTICE

This notice is applicable for USA / Canada only.
If shipped to USA/Canada, install only a UL LISTED/CSA LABELLED power supply cord meeting the following specifications:

SPECIFICATIONS

Plug Type	Nema-Plug 5-15p
Cord	Type SVT or SJT, minimum 3 × 18 AWG
Length	Maximum 15 feet
Rating	Minimum 7 A, 125 V



MICROFILM

USB HUB UNIT
SONY®

TABLE OF CONTENTS

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3. DIAGRAMS		
3-1. Schematic Diagrams and Printed Wiring Boards ..	3-1	
3-2. Semiconductors ..	3-7	
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5. ELECTRICAL PARTS LIST		5-1

SAFETY-RELATED COMPONENT WARNING!!
COMPONENTS IDENTIFIED BY SHADING AND MARK \triangle ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL FOR SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

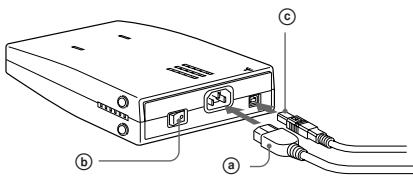
ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!
LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE \triangle SONT CRITIQUES POUR LA SÉCURITÉ. NE LES REMPLACER QUE PAR UNE PIÈCE PORTANT LE NUMÉRO SPECIFIÉ. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIÉS DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

SECTION 1

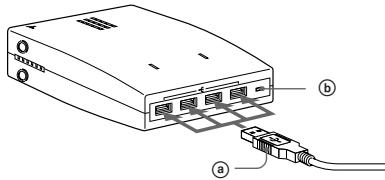
GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

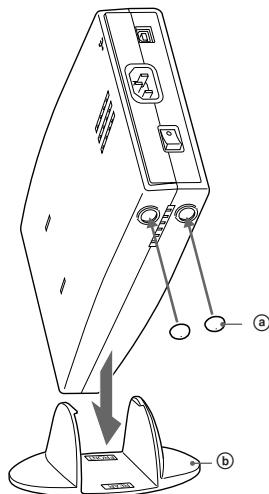
A



B



C



English

Setup

This USB unit provides a fast and easy way to connect USB compliant peripheral devices (such as a mouse, keyboards, printers, and scanners) to your computer using a standardized USB cable.

- 1 Turn "on" the power of your computer and any self-powered USB compliant peripheral devices.
- 2 Connect one end of the AC power cord to the unit (fig. A-(c)), and the other end to a power outlet.
- 3 Turn "on" the power switch. (fig. A-(b))
- 4 Connect the square end of the supplied USB cable to the unit's square connector. (fig. A-(c)) Then connect the rectangular end to your computer. If the LED is green (fig. B-(b)), you are ready to use the USB unit. If the LED is orange, see "Troubleshooting" on the reverse page.

For customers using Windows®

If a message appears on your screen, follow the on-screen instructions and select Generic USB Hub as the default setting.

- 5 Connect your peripheral devices to the rectangular USB connectors. (fig. B-(a))

To set the unit on its side:

Attach the supplied rubber feet (2) to the holes on the side of the unit. (fig. C-(a)) Then attach the stand by inserting the nibs into the slots on the unit. (fig. C-(b)) Make sure that the word FRONT on the stand is facing the side of the unit with the LED. You can stand the unit on either of its sides.

Notes:

- This hub unit is not guaranteed to work with all USB peripheral devices.
- The unit does not include driver software for individual USB devices. In most cases, USB driver software needs to be installed on the host computer. Refer to the peripheral device's instruction manual for further details. (This unit does not require special software to operate.)
- Not all computers and / or operating systems support USB configurations. If you are using Windows®, the version must be OSR 2.1 or later and have USB support. Check your computer's instruction manual to see if you can connect USB devices.
- If you connect a keyboard or mouse to the USB connectors and then boot your computer for the first time, the peripheral devices may not function. First connect the keyboard and mouse directly to the computer and setup the USB compliant devices.

English

Troubleshooting

The LED is not lit

- Turn "on" the power switch. The unit must be "on" to work as a hub for USB peripheral devices.

The LED is orange

- Check that the USB cables are securely connected to the unit.
- Check that the USB port is enabled on the host computer's basic input/output system (BIOS). Refer to your computer's manual to change the port setting.

Individual USB peripheral devices do not work

- If the connected USB peripheral device uses software, install the software on the host computer.
- Turn the unit's power switch "off" and "on." If your USB peripheral devices are self-powered, turn their switches "off" and "on" as well.
- Check that the connectors are secure in their sockets.
- Install the latest version of the device driver on your computer. Contact your device's manufacturer for information about the appropriate device driver.

For customers using Windows® 95

If you are having trouble using this USB unit, try the steps below.

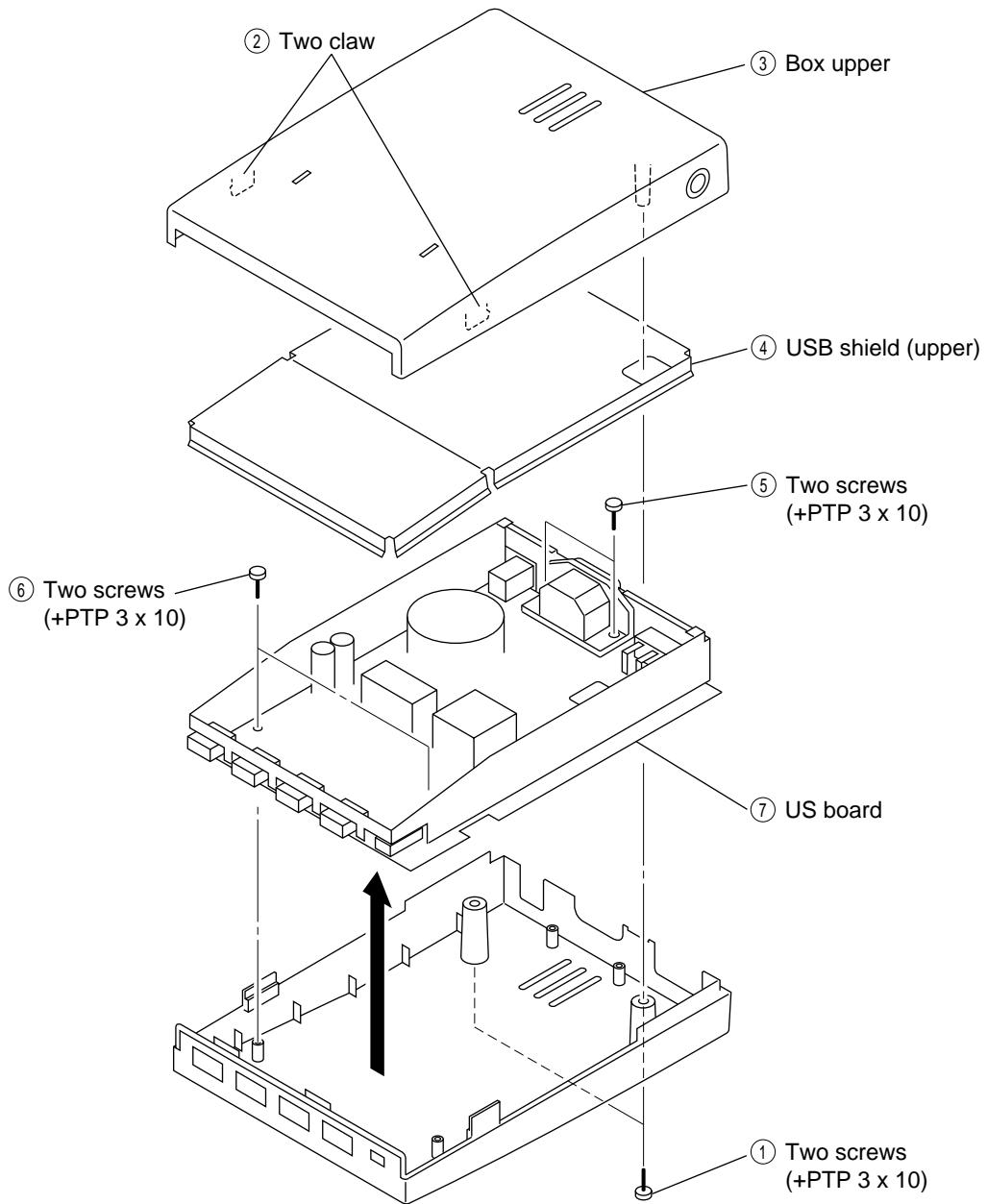
1. Right-click on My Computer and select Properties.
2. Click on the Device Manager tab. Scroll down and select Universal Serial Bus Controller.
 - ⇒ If Universal Serial Bus Controller does not appear, you need to load a USB supplement disk. Contact your computer's manufacturer for more information about obtaining a USB supplement disk.
3. Select Generic USB Device from the USB controller list and click on Properties. If there is a check in the box next to "Disable in this hardware profile," remove the check.
4. Click on Refresh.

- Windows® is registered trademark of Microsoft Corporation in the United States and other countries.
- All other product names mentioned herein may be the trademarks or registered trademarks of their respective companies.
- Furthermore, "TM" and "®" are not mentioned in each case in this manual.

SECTION 2

DISASSEMBLY

2-1. BOX REMOVAL



1. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

ote:
All capacitors are in μF unless otherwise noted. (pF: $\mu\mu\text{F}$)
Capacitors without voltage indication are all 50 V.
Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm
Rating electrical power 1/4 W (CHIP : 1/10 W)

All resistors are in ohms.
 : nonflammable resistor.
 : fusible resistor.
 : internal component.
 : panel designation, and adjustment for repair.
All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
 : earth-ground.
 : earth-chassis.
All voltages are in V.
Readings are taken with a 10 M digital multimeter.
Voltage value is non signal state.
Voltage variations may be noted due to normal production tolerances.
 : B + bus.
 : B - bus.

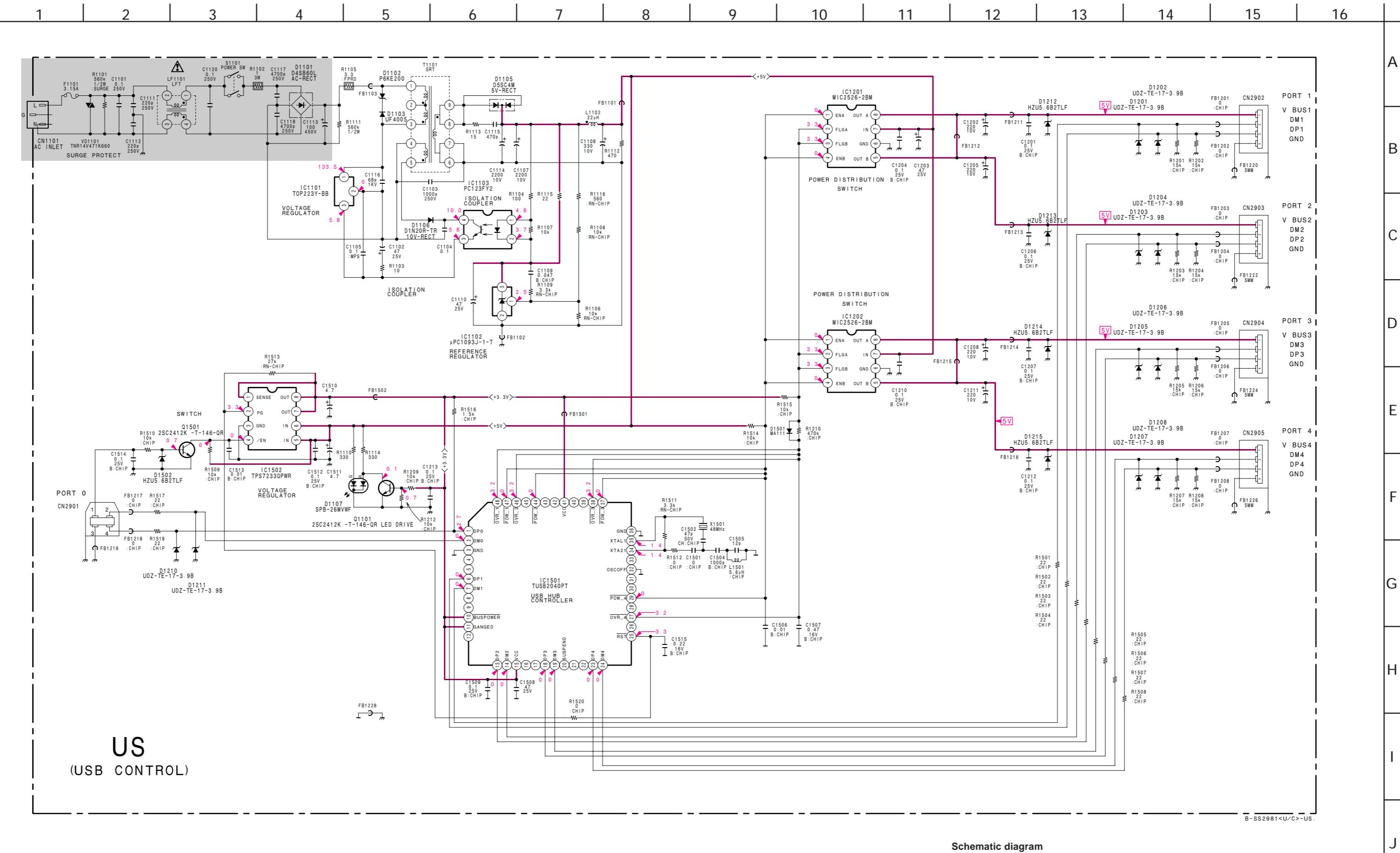
terminal name of semiconductors in silk screen
printed circuit (*)

Device	Printed symbol	Terminal name	Circuit
Transistor		Collector Base Emitter	 
Transistor		Collector Base Emitter	
Diode		Cathode  Anode	
- Discrete semiconductor			

Ver.1.5
chip semiconductors that are not actually used are included.)

Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.

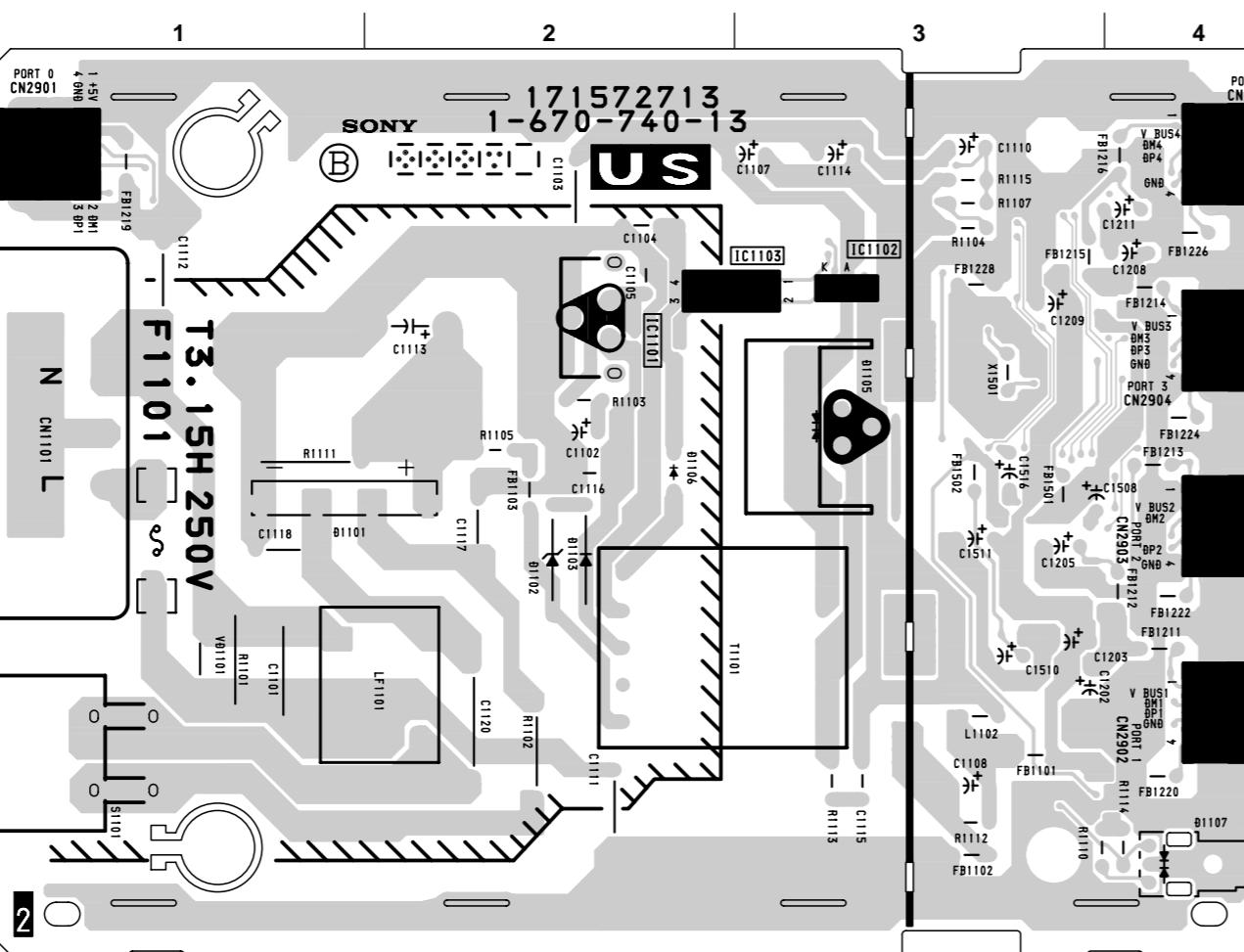
Note: Les composants identifiés par un trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



U

[USB CONTROL]

— US BOARD (Conductor Side) —

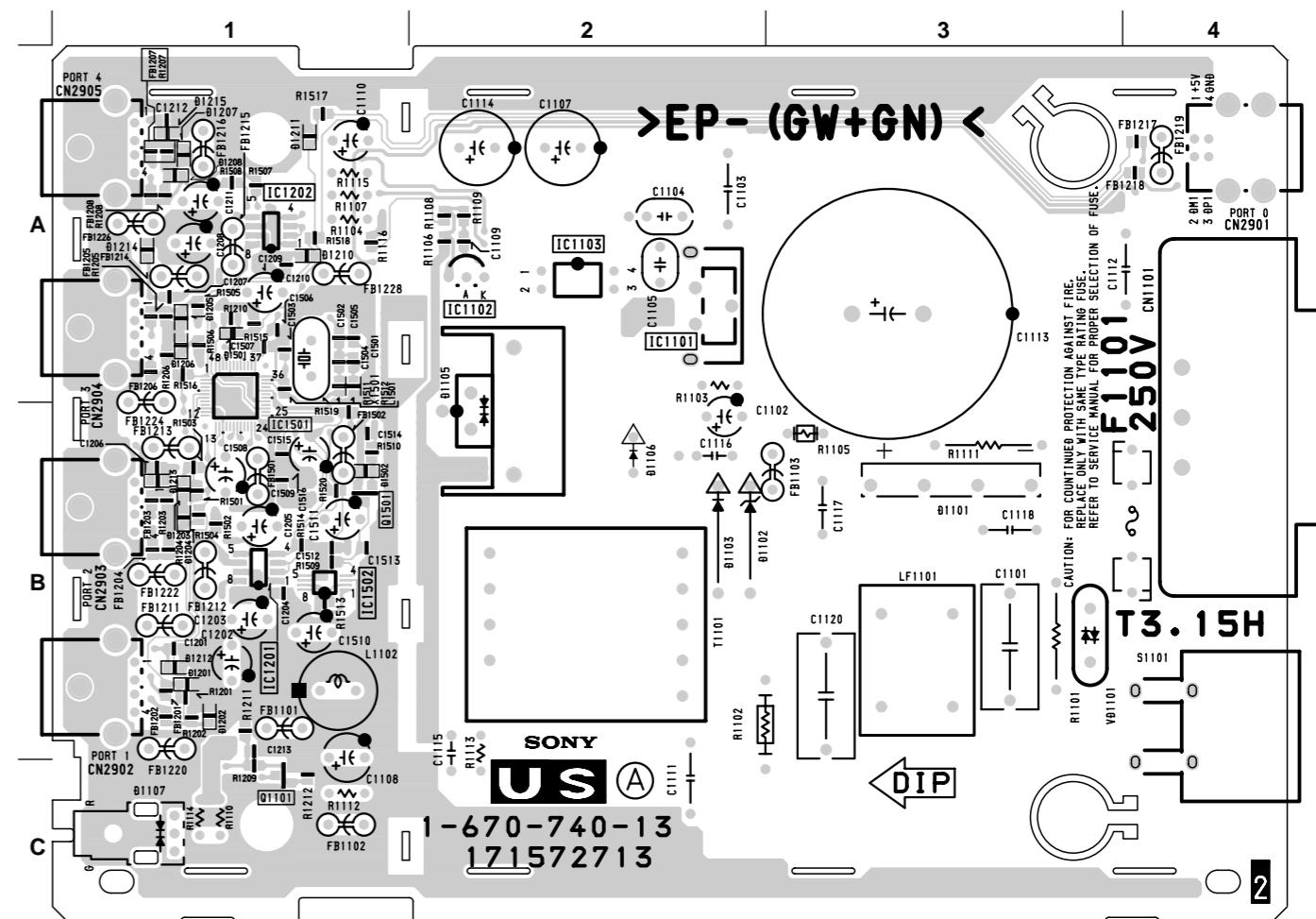


- US BOARD SEMICONDUCTOR LOCATION

IC		
	(Conductor Side)	(Component Side)
IC1101	A-2	A-2
IC1102	A-3	A-2
IC1103	A-2	A-2
IC1201		B-1
IC1202		A-1
IC1501		B-1
IC1502		B-1
TRANSISTOR		
	(Conductor Side)	(Component Side) *
Q1101		C-1 ②
Q1501		B-1 ②
DIODE		
	(Conductor Side)	(Component Side) *
D1101	B-1	B-3 -
D1102	B-2	B-2 -
D1103	B-2	B-2 -
D1105	A-3	A-2 -
D1106	B-2	B-2 -
D1107	C-4	C-1 -
D1201		B-1 ③
D1202		B-1 ③
D1203		B-1 ③
D1204		B-1 ③
D1205		A-1 ③
D1206		A-1 ③
D1207		A-1 ③
D1208		A-1 ③
D1210		A-1 ③
D1211		A-1 ③
D1212		B-1 ③
D1213		B-1 ③
D1214		A-1 ③
D1215		A-1 ③
D1502		B-1 ③
CRYSTAL		
X1501	A-3	A-1

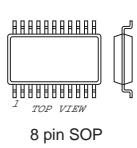
*: Refer to Terminal name of semiconductors
in silk screen printed circuit (see page 3-1)

— US BOARD (Component Side) —

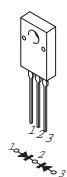


3-2. SEMICONDUCTORS

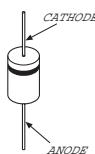
MIC2526-2BM-T&R
TPS7233QPWR



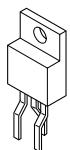
D5SC4M



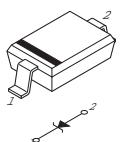
UF4005PKG23



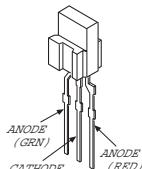
TOP223Y-BB



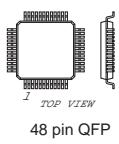
HZU5.6B2TLF
HZU5.6B2TRF



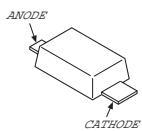
SPB-26MVWF



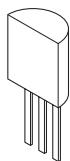
TUSB2040PT



MA8039



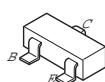
UPC1093J-1-T



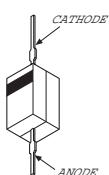
PC123F2
PC123FY2



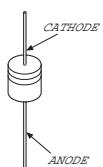
2SC1623-L5L6
2SC2412K-T-146-QR



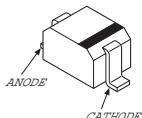
P6KE200AG23



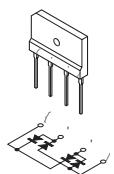
D1N20R



UDZ-TE-17-3.9B



D4SB60L



SECTION 4

EXPLODED VIEWS

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

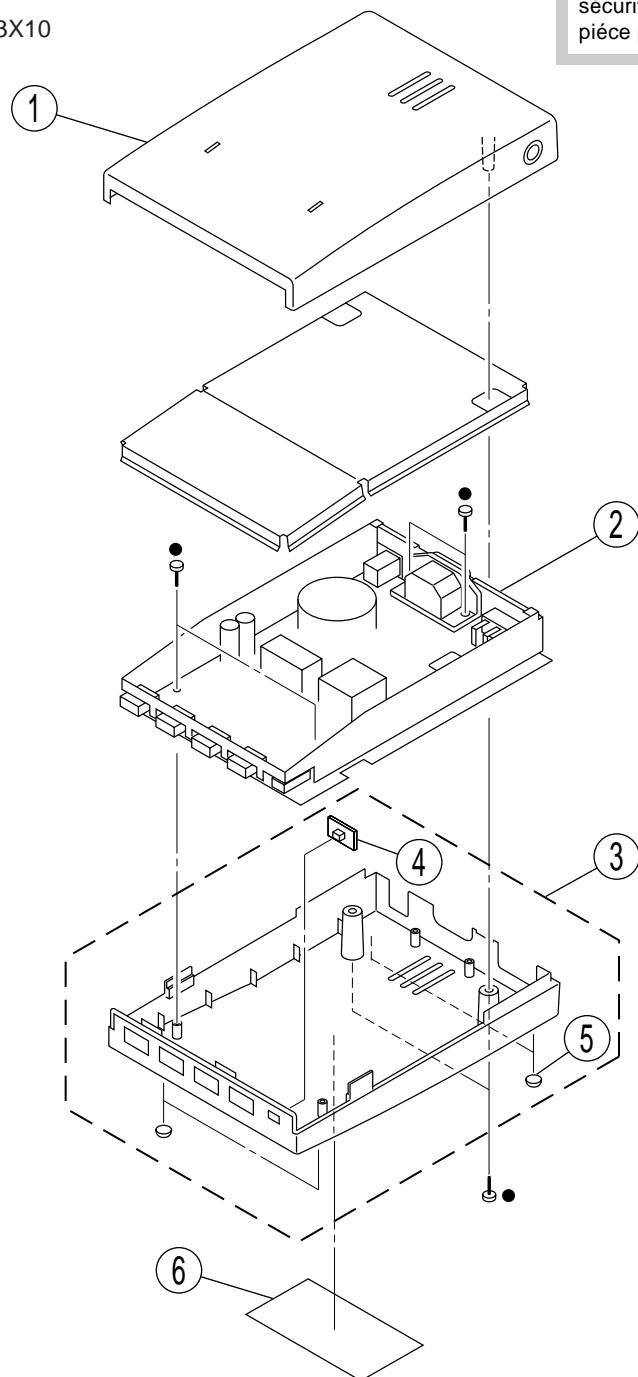
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

4-1. BASE

● 7-685-647-79 +PTP 3X10

Les composants identifiés par un trame et une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

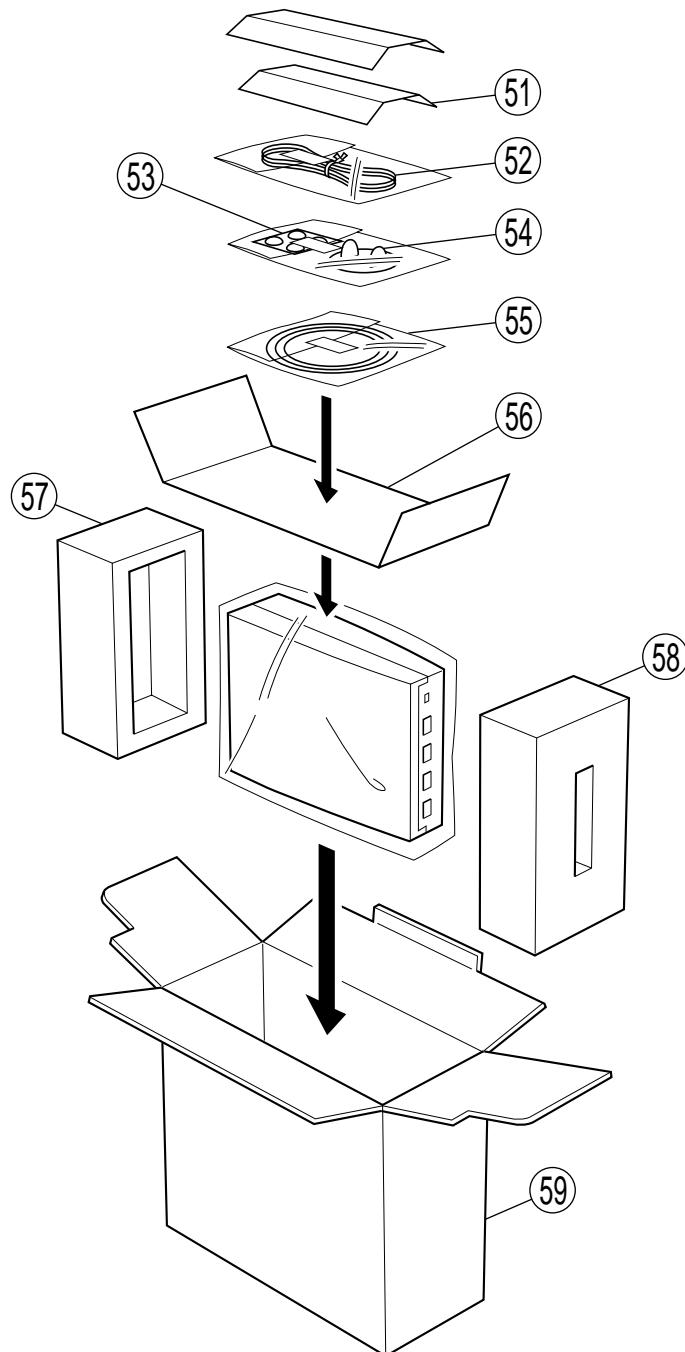


REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	4-066-341-01	BOX UPPER		4	4-066-336-01	BAR, OPTICAL	
2	* A-1373-692-A	US BOARD, COMPLETE		5	4-066-332-01	FOOT (SMALL)	
3	X-4035-969-1	BOX LOWER ASSY	4,5	6	* 4-066-337-01	LABEL, INFORMATION	

4-2. PACKING MATERIALS

The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

Les composants identifiés par un tramé et une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
51	3-864-554-11	MANUAL, INSTRUCTION		55	1-790-081-11	CABLE, USB	
52	\triangle 1-765-719-21	CORD SET, POWER (AEP)		56	* 4-066-558-01	TRAY	
	\triangle 1-765-720-21	CORD SET, POWER (U/C)		57	* 4-066-561-01	CUSHION, REAR	
53	4-066-333-01	FOOT (LARGE)		58	* 4-066-560-01	CUSHION, FRONT	
54	X-4035-968-1	STAND ASSY		59	* 4-066-557-01	INDIVIDUAL CARTON	

SECTION 5

ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par un trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

RESISTORS

- All resistors are in ohms
- F : nonflammable

- CAPACITORS
- MF : μ F
- COILS
- UH : μ H

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	* A-1373-692-A	US BOARD, COMPLETE	*****	C1502	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
				C1504	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
				C1505	1-163-229-11	CERAMIC CHIP 12PF	5% 50V
				C1506	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
	2-371-561-00	BUSHING (P), INSULATING (IC1101)		C1507	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
	* 4-049-002-01	HOLDER, LED (D1107)		C1508	1-104-664-11	ELECT 47MF	20% 25V
	4-060-842-01	SHEET, INSULATING (IC1101)		C1509	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
	4-382-854-11	SCREW (M3X10), P, SW (+) (D1105)		C1510	1-126-963-11	ELECT 4.7MF	20% 50V
	4-389-025-01	SCREW (M4) (EXT TOOTH WASHER)		C1511	1-126-963-11	ELECT 4.7MF	20% 50V
	7-682-947-01	SCREW +PSW 3X6 (IC1101)		C1512	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
				C1513	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
				C1514	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
				C1515	1-164-489-11	CERAMIC CHIP 0.22MF	10% 16V
		<CAPACITOR>					
	C1101 Δ 1-104-705-51	FILM	0.1MF 20% 250V				
	C1102	1-104-664-11	ELECT 47MF 20% 25V				
	C1103	1-113-903-11	CERAMIC 0.001MF 20% 250V				
	C1104	1-130-495-00	FILM 0.1MF 5% 50V				
	C1105	1-136-165-00	FILM 0.1MF 5% 50V				
	C1107	1-126-927-11	ELECT 2200MF 20% 10V				
	C1108	1-126-924-11	ELECT 330MF 20% 10V				
	C1109	1-104-760-11	CERAMIC CHIP 0.047MF 10% 50V				
	C1110	1-104-664-11	ELECT 47MF 20% 25V				
	C1111 Δ 1-113-896-51	CERAMIC 220PF 10% 250V					
	C1112 Δ 1-113-896-51	CERAMIC 220PF 10% 250V					
	C1113 Δ 1-125-977-11	CAPACITOR 100 450V					
	C1114	1-126-927-11	ELECT 2200MF 20% 10V				
	C1115	1-102-824-00	CERAMIC 470PF 5% 50V				
	C1116	1-117-219-11	CERAMIC 68PF 5% 1KV				
	C1117 Δ 1-113-926-91	CERAMIC 0.0047MF 250V					
	C1118 Δ 1-113-926-91	CERAMIC 0.0047MF 250V					
	C1120 Δ 1-104-705-51	FILM 0.1MF 20% 250V					
	C1201	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V				
	C1202	1-126-934-11	ELECT 220MF 20% 10V				
	C1203	1-104-664-11	ELECT 47MF 20% 25V				
	C1204	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V				
	C1205	1-126-934-11	ELECT 220MF 20% 10V				
	C1206	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V				
	C1207	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V				
	C1208	1-126-934-11	ELECT 220MF 20% 10V				
	C1210	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V				
	C1211	1-126-934-11	ELECT 220MF 20% 10V				
	C1212	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V				
	C1213	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V				
C1501	1-216-295-91	SHORT	0				

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par un tramé et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

US

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
D1214	8-719-047-98	ZENER DIODE HZU5.6B2TRF					
D1215	8-719-047-98	ZENER DIODE HZU5.6B2TRF					
D1501	8-719-404-49	DIODE MA111					
D1502	8-719-047-98	ZENER DIODE HZU5.6B2TRF					
<FUSE>				<TRANSISTOR>			
F1101Δ1-576-230-11 FUSE (H.B.C.) (3.15A/250V) 1-533-223-11 HOLDER, FUSE ; F1101				Q1101	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q1501	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
<FERRITE BEAD>				<RESISTOR>			
FB1101	1-412-911-11	FERRITE	0UH	R1101 Δ 1-220-827-91	REGISTER	560K	5% 1/2W
FB1102	1-412-911-11	FERRITE	0UH	R1102 Δ 1-217-249-11	WIREWOUND	1	10% 3W F
FB1103	1-412-911-11	FERRITE	0UH	R1103	1-249-393-11	CARBON	5% 1/4W
FB1201	1-216-295-91	SHORT	0	R1104	1-247-807-31	CARBON	5% 1/4W
FB1202	1-216-295-91	SHORT	0	R1105	1-249-387-11	CARBON	5% 1/4W F
FB1203	1-216-295-91	SHORT	0	R1106	1-216-675-11	METAL CHIP	0.50% 1/10W
FB1204	1-216-295-91	SHORT	0	R1107	1-249-429-11	CARBON	5% 1/4W
FB1205	1-216-295-91	SHORT	0	R1108	1-216-675-11	METAL CHIP	0.50% 1/10W
FB1206	1-216-295-91	SHORT	0	R1109	1-216-663-11	METAL CHIP	0.50% 1/10W
FB1207	1-216-295-91	SHORT	0	R1110	1-249-411-11	CARBON	5% 1/4W
FB1208	1-216-295-91	SHORT	0	R1111	1-220-827-91	REGISTER	5% 1/2W
FB1211	1-412-911-11	FERRITE	0UH	R1112	1-249-413-11	CARBON	5% 1/4W
FB1212	1-412-911-11	FERRITE	0UH	R1113	1-249-395-11	CARBON	5% 1/4W
FB1213	1-412-911-11	FERRITE	0UH	R1114	1-249-411-11	CARBON	5% 1/4W
FB1214	1-412-911-11	FERRITE	0UH	R1115	1-247-791-91	CARBON	5% 1/4W
FB1215	1-412-911-11	FERRITE	0UH	R1116	1-216-645-11	METAL CHIP	0.50% 1/10W
FB1216	1-412-911-11	FERRITE	0UH	R1201	1-216-077-00	RES,CHIP	5% 1/10W
FB1217	1-216-295-91	SHORT	0	R1202	1-216-077-00	RES,CHIP	5% 1/10W
FB1218	1-216-295-91	SHORT	0	R1203	1-216-077-00	RES,CHIP	5% 1/10W
FB1219	1-412-911-11	FERRITE	0UH	R1204	1-216-077-00	RES,CHIP	5% 1/10W
FB1228	1-412-911-11	FERRITE	0UH	R1205	1-216-077-00	RES,CHIP	5% 1/10W
FB1501	1-412-911-11	FERRITE	0UH	R1206	1-216-077-00	RES,CHIP	5% 1/10W
FB1502	1-412-911-11	FERRITE	0UH	R1207	1-216-077-00	RES,CHIP	5% 1/10W
<IC>				R1208	1-216-077-00	RES,CHIP	5% 1/10W
				R1209	1-216-073-00	RES,CHIP	5% 1/10W
IC1101	8-759-470-64	IC TOP223Y-BB		R1210	1-216-113-00	RES,CHIP	5% 1/10W
IC1102	8-759-198-31	IC uPC1093J-1-T		R1212	1-216-073-00	RES,CHIP	5% 1/10W
IC1103	8-749-010-64	PHOTO COUPLER PC123F2		R1501	1-216-009-00	RES,CHIP	5% 1/10W
IC1201	8-759-542-74	IC MIC2526-2BM-T&R		R1502	1-216-009-00	RES,CHIP	5% 1/10W
IC1202	8-759-542-74	IC MIC2526-2BM-T&R		R1503	1-216-009-00	RES,CHIP	5% 1/10W
IC1501	8-759-542-53	IC TUSB2040PT		R1504	1-216-009-00	RES,CHIP	5% 1/10W
IC1502	8-759-542-69	IC TPS7233QPWR		R1505	1-216-009-00	RES,CHIP	5% 1/10W
<COIL>				R1506	1-216-009-00	RES,CHIP	5% 1/10W
				R1507	1-216-009-00	RES,CHIP	5% 1/10W
				R1508	1-216-009-00	RES,CHIP	5% 1/10W
				R1509	1-216-073-00	RES,CHIP	5% 1/10W
				R1510	1-216-073-00	RES,CHIP	5% 1/10W
				R1511	1-216-663-11	METAL CHIP	0.50% 1/10W
				R1512	1-216-295-91	SHORT	5% 1/10W
				R1513	1-216-685-11	METAL CHIP	0.50% 1/10W
<FILTER>				R1514	1-216-073-00	RES,CHIP	5% 1/10W
				R1515	1-216-073-00	RES,CHIP	5% 1/10W
				R1516	1-216-053-00	RES,CHIP	5% 1/10W
				R1517	1-216-009-00	RES,CHIP	5% 1/10W
				R1518	1-216-009-00	RES,CHIP	5% 1/10W
				R1520	1-216-295-91	SHORT	0
LF1101Δ1-424-117-11FILTER, LINE							

US

Les composants identifiés par un trame et une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
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<SWITCH>

S1101 \triangle 1-771-242-11 SWITCH, POWER (AJ7231BK)

<TRANSFORMER>

T1101 1-433-440-11 TRANSFORMER, CONVERTER (SRT)

<VARISTOR>

VD1101 \triangle 1-801-268-51VARISTOR TNR14V471K660

<CRYSTAL>

X1501 1-767-587-31 VIBRATOR, CRYSTAL